

国产丝瓜藓属(真藓科)两新种

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Two new species of the genus *Pohlia* (Bryaceae, Musci) from China

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Abstract *Pohlia hyaloperistoma* Zhang, Li & Higuchi, and *P. macrocarpa* Zhang, Li, & Higuchi are described as new species from Yunnan and Xizang (Tibet) of China respectively. *Pohlia hyaloperistoma* is characterized by having the hyaline and smooth exostome, and *P. macrocarpa* is characterized by having the large capsules and dioecious sexuality.

Key words *Pohlia*; *P. hyaloperistoma* Zhang, Li & Higuchi; *P. macrocarpa* Zhang, Li & Higuchi; New species; China

In the course of our studies on the family Bryaceae from China, we have encountered two distinctive mosses that appear to represent undescribed species.

1 *Pohlia hyaloperistoma* Zhang, Li & Higuchi, sp. nov. Figs. 1~2

Species nova insignis setis rigidis, peristomiis laevipellucidis non papillatis, superne articulatis, membrana basilari humiliore, ca. 1/6 partem inferiorem dentis occupante.

Planta synoecia congesta vel gregaria luteolo-viridis, nitida. Caulis erectus ca. 1 cm altus, simplex, interdum paulo ramosus. Folia lanceolata usque anguste lanceolata, 1.4~2.5 mm longa, apice acuminata, margine fere plana, superne distincte serrulata, costis infra apicem foliorum evanidis, cellulis linearibus vel vermicularibus, 70~150 $\mu\text{m} \times 7.5 \sim 13 \mu\text{m}$, tenuibus, basi brevioribus plus minusve latoribus. Seta ca. 1.5~2 cm alta, robusta rigida. Theca horizontalis vel nutans, longe pyriformis vel clavata, dentibus exostomatis lanceolatis ochraceis laevipellucidis non papillatis, superne articulatis, apice rotundato-obtusis, dentibus endostomatis eis exostomatis similibus, sed linearibus longioribus, superne anguste perforatis, membrana basilari humiliore ca. 1/6 partem inferiorem dentis occupante apice eciliata. Sporae ca. 23 μm diam., ochraceae dense minute papillatae.

Synoecious. Plants in tufts or loosely tufted, yellowish-green to green with silky luster. Stems 1 cm high, simple or sometimes slightly branched. Leaves lanceolate to narrowly lanceolate, 1.4~2.5 mm long, acuminate, margins slightly recurved, serrulate near apex, costa strong, ending below apex in lower leaves; median leaf cells linear, ca. vermicular, 70~150 $\mu\text{m} \times 7.5 \sim 13 \mu\text{m}$, thin-walled, no more different at both margins, somewhat broad and rectangular at base. Seta stiff,

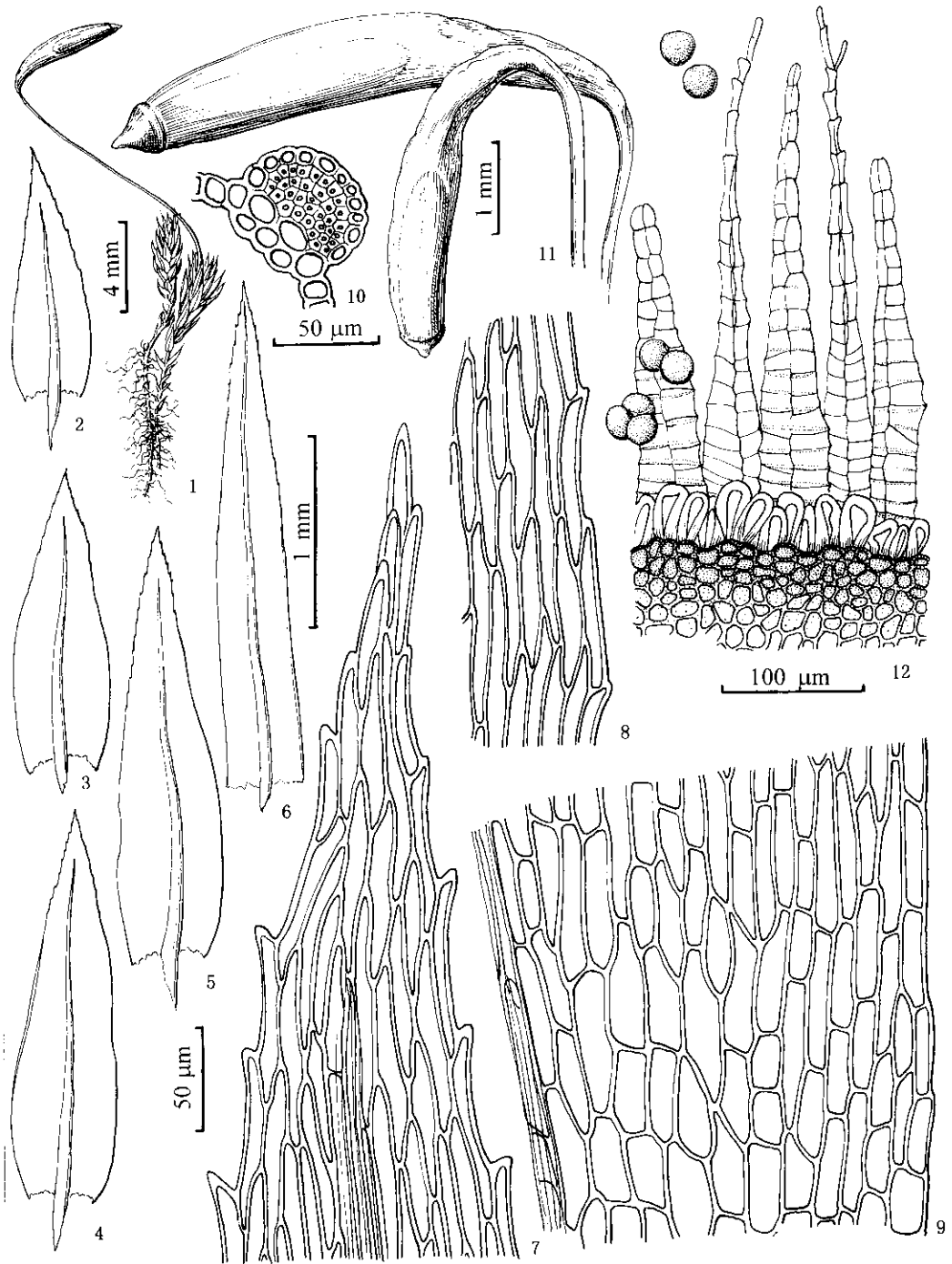


Fig. 1 *Pohlia hyaloperistoma* Zhang, Li & Higuchi 1. Plant; 2~6. Leaves; 7. Cells in leaf-apex; 8. Cells in middle part of leaf; 9. Cells in basal part of leaf; 10. Cross-section of costa; 11. Capsule; 12. Peristome and spores. (All drawn from holotype)

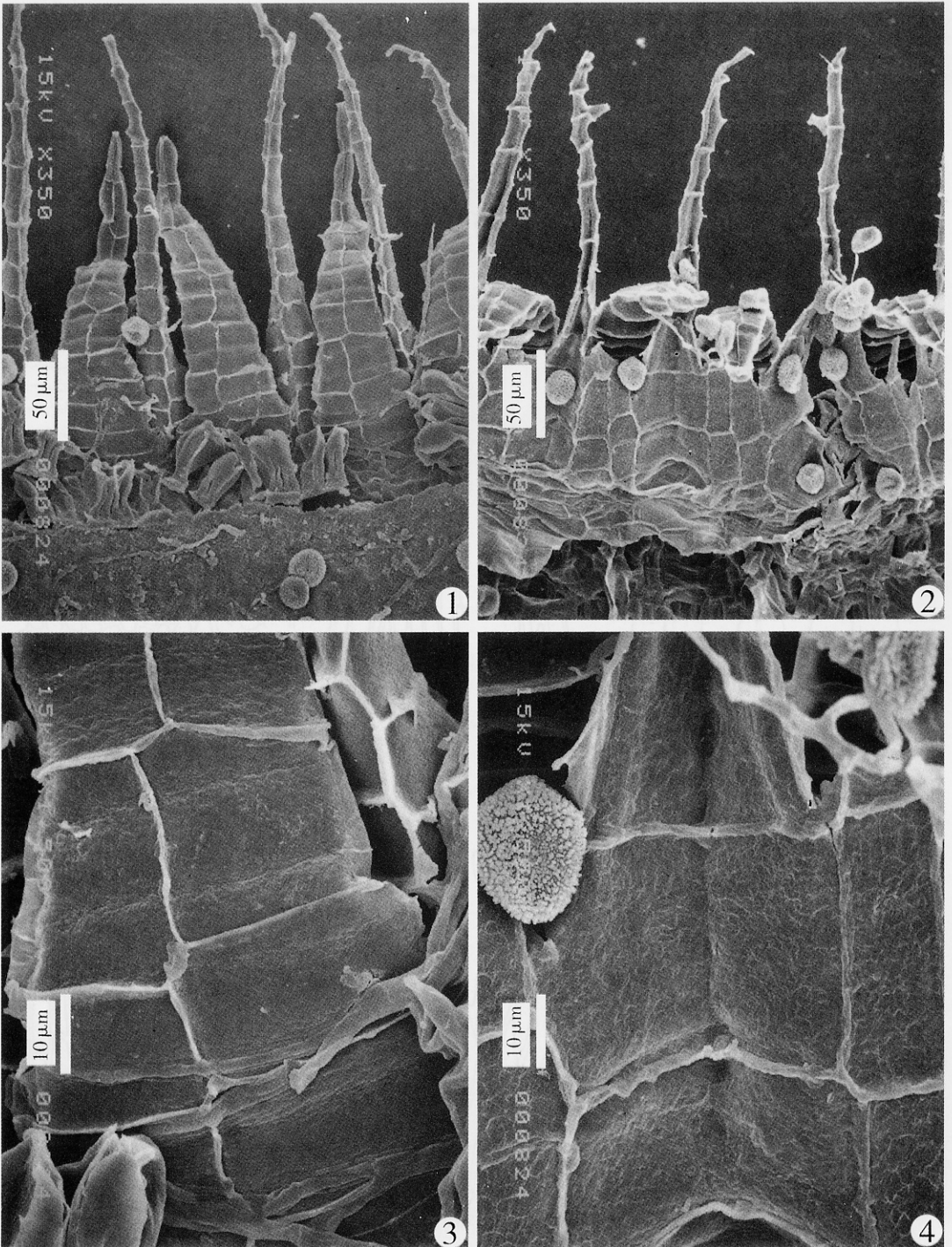


Fig. 2 SEM micrographs of peristome of *Pohlia hyaloperistoma* Zhang, Li & Higuchi (from Higuchi 25961) 1. Outer view of peristome; 2. Inner view of peristome; 3. Outer surface of lower part of exostome teeth; 4. Basal membrane.
 (Scale bars for 1, 2 = 50 μm; 3, 4 = 10 μm)

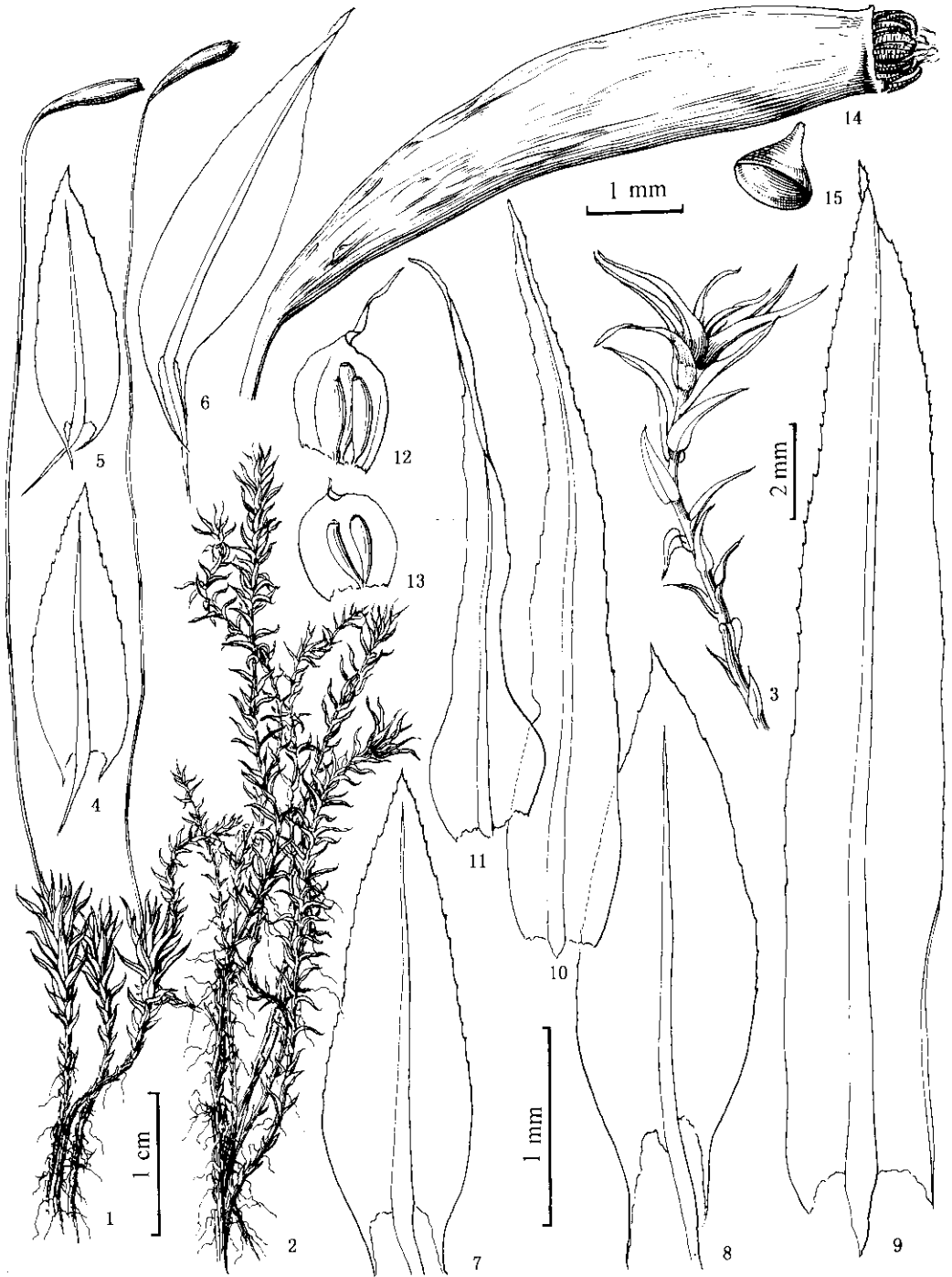


Fig. 3 *Pohlia macrocarpa* Zhang, Li & Higuchi 1, 2. Plants; 3. Perigonal branch; 4-6. Branch leaves; 7, 8. Stem leaves; 9. Perichaetial leaf; 10-13. Perigonal leaves; 14. Capsule; 15. Operculum. (All drawn from holotype)

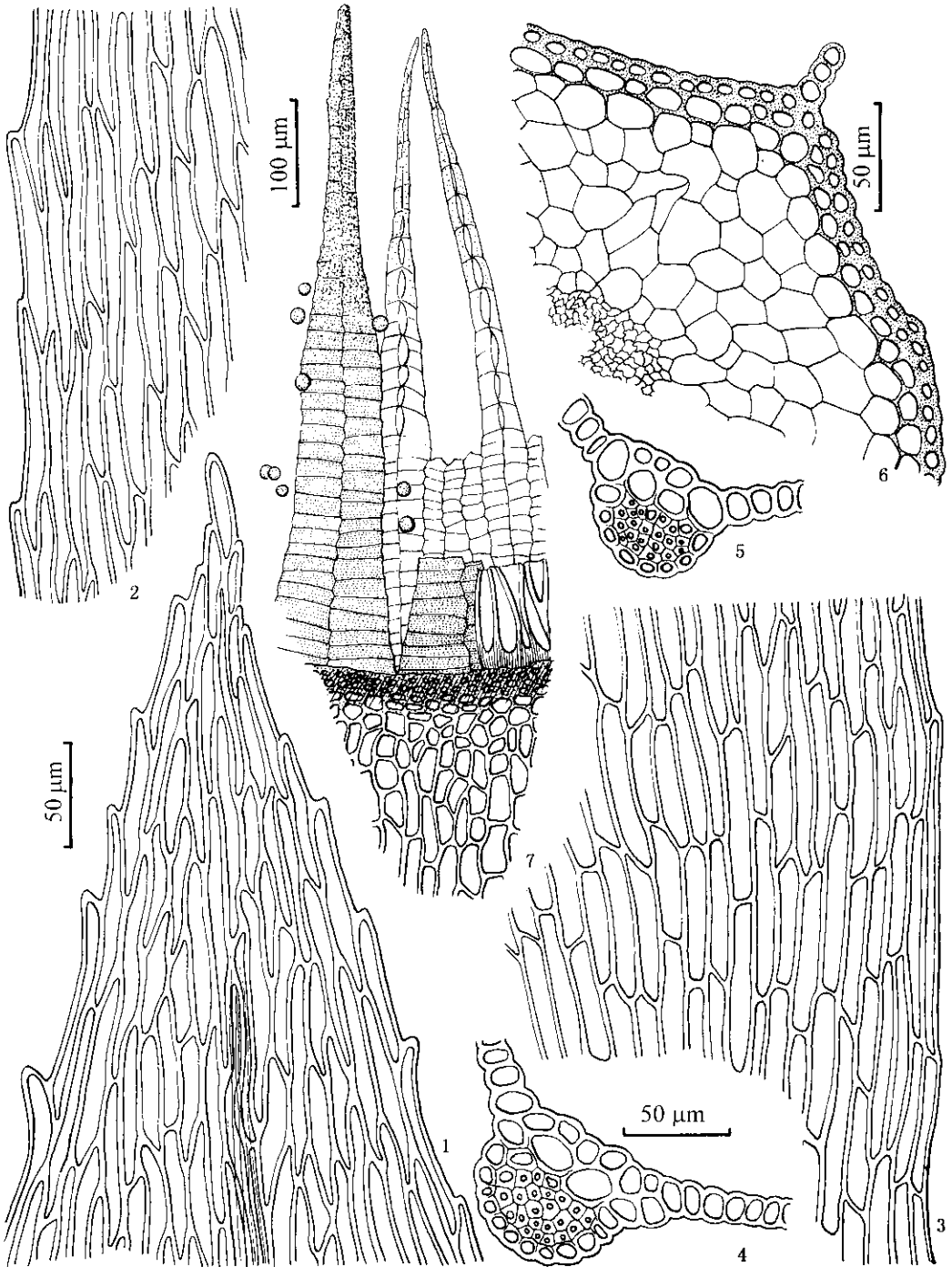


Fig. 4 *Pohlia macrocarpa* Zhang, Li & Higuchi 1. Cells in leaf-apex; 2. Cells in middle part of leaf; 3. Cells in basal part of leaf; 4, 5. Cross-section of costa; 6. Part of cross-section of stem; 7. Peristome and spores. (All drawn from holotype)

erect or sometimes slightly curved, 1.5 ~ 2 cm long. Capsules nearly horizontal or nutant, 3 ~ 5 mm \times 0.55 ~ 0.9 mm, clavate-pyriform to clavate. Operculum conical. Annulus present. Peristome double; exostome teeth narrowly elongated, tapering, with obtuse tips, slightly irregular in length, smooth, transparent or translucent, on top of 1/3 with similar articulated nodules; endostome teeth longer than exostome teeth; segments narrowly perforate above; basal membrane low, occupying 1/6 of endostome teeth in height; cilia present or rudimentary. Spores finely papillose, ca. 23 μ m in diameter.

China. Yunnan: Dêqên, Mt. Baimaxueshan, 4100 m, under bushes, on rotten wood, 1994-10-04, D. C. Zhang 489 (holotype, here designated, HKAS); the same locality, 4200 m, under bushes, on rotten wood, 1981-07-14, X. J. Li 81-2036 (HKAS); the same locality, 4350 m, under bushes, on rotten wood, 1994-10-03, Higuchi 25961 (TNS); Zhongdian, Bitahai Lake, 3500 m, on rocky soil, 1994-09-21, D. C. Zhang 168 (HKAS, TNS).

This species resembles *Pohlia cruda*, *P. timmioides*, and *P. longicola* in gametophyte characters, but is easily distinguished by its smooth and transparent exostome, lower basal membranes, and stiff seta.

2 *Pohlia macrocarpa* Zhang, Li & Higuchi, sp. nov. Figs. 3, 4

P. elongatae similis, sed planta majore, dioica, foliis margine denticulatis, basi decurrentibus, setis longioribus, sporangiis saepe majoribus facile differt.

Planta dioecia; caulis plantae femineae 1 ~ 2 cm altus, erectus simplex vel leviter ramosus, opacus, congestus vel laxe gregarius, luteo-viridis, inferne laxe et superne dense foliosus. Bractaeae perichaetiales longiores, exteriores ca. 5 mm longae. Planta mascula sterilisque altior ca. 4 ~ 6 cm alta. Bractaeae perigoniales breviores, exteriores ovato-lanceolatae, interiores ovatae apice apiculatae. Antheridia numerosa. Folia lanceolata vel longe lanceolata, 2 ~ 3.8 mm \times 0.5 ~ 1 mm, plana, apice acuminata, basi decurrentia, margine denticulata, costis infra apicem foliorum evanidis, cellulis linearibus 70 ~ 150 (~ 190) μ m \times 7 ~ 12 μ m, parietibus plus minusve crassis praeditis. Seta erecta, ca. 5 ~ 6 cm longa. Capsulae erecto-patentes vel horizontales, ca. 7 mm \times 1.2 mm, collis elongatis, dentibus exostomii anguste lanceolatis, superne crasse papillois, inferne minute papillois, dentibus endostomii anguste linearibus, superne laxe papillois, anguste perforatis, eciliatis. Sporae globosae 13 ~ 20 μ m diam., ochraceae, indistincte papillatae.

Dioecious. Plants in tufts or loosely tufted, yellowish-green with brown radicles below, without luster. Stems of female plant 1 ~ 2 cm long, erect, simple or sparsely branched, with numerous leaves above, somewhat distant and smaller leaves below. Stems of male and sterile plant 4 ~ 6 cm long, with slender and somewhat distant leaves; perigonal leaves ovate-lanceolate to ovate, shortly cuspidate; antheridia numerous. Leaves lanceolate to linear-lanceolate, 2 ~ 3.8 mm \times 0.5 ~ 1.0 mm, acuminate, twisted at apex, decurrent at base, margins plane, serrulate in the upper 2/3 part of margin; costa strong, ending below apex of leaf; laminal cells narrowly linear, somewhat thick-walled, 70 ~ 150 (~ 190) μ m \times 7 ~ 12 μ m in median part of leaf, sometimes slightly flexuose, not constantly narrower towards margin, not lax at base. Seta erect, thin, 5 ~ 6 cm long. Capsules suberect to horizontal, elongated, clavate, ca. 7 mm \times 1.2 mm; neck slightly shorter than urn in length; mouth relatively small. Operculum conical. Annulus present, narrow, removable. Peristome double, yellowish-brown; exostome teeth narrowly elongated, tapering, distinctly papillose above, minutely papillose below; endostome teeth as long as exostome teeth; segments sublinear, papillose,

narrowly perforate above; basal membrane low; cilia absent. Spores brown, almost smooth, 13 ~ 20 μm in diam.

China. Xizang (Tibet): Mêdog, Hanmi to Nage, 2600 ~ 2800 m, on rocky soil, 1974-08-19, S. K. Chen 78a (holotype, here designated, HKAS; isotype, TNS); the same locality, 1300 ~ 2100 m, on rocky soil, 1974-08-19, S. K. Chen 71 (HKAS, TNS), 74 (HKAS); the same locality, 3200 m, on rocky soil, 1974-08-31, S. K. Wu 5201a (HKAS).

This species is similar to *P. elongata* in appearance, but is distinct by having the large capsules, serrulate leaf margins, and dioecious sexuality.

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摘要 报道了我国丝瓜藓属 *Pohlia* 两新种,即产自云南的明齿丝瓜藓 *P. hyaloperistoma* Zhang, Li & Higuchi 和产自西藏的疏叶丝瓜藓 *P. macrocarpa* Zhang, Li & Higuchi。前者主要特征为蒴齿透明无疣,后者孢子体大型且雌雄异株。

关键词 丝瓜藓属;明齿丝瓜藓;疏叶丝瓜藓;新种;中国

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